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APPLICATION NO.	FILING DATE	FIRST NAMED INVENTOR	ATTORNEY DOCKET NO.	CONFIRMATION NO.
10/045,710	01/14/2002	Lothar Diehl	10191/2143	9804
26646	7590	11/24/2003	EXAMINER	
KENYON & KENYON ONE BROADWAY NEW YORK, NY 10004			OLSEN, KAJ K	
			ART UNIT	PAPER NUMBER

1753

DATE MAILED: 11/24/2003

Please find below and/or attached an Office communication concerning this application or proceeding.

Office Action Summary	Application No. 10/045,710	Applicant(s) DIEHL, LOTHAR	
	Examiner Kaj Olsen	Art Unit 1753	

-- The MAILING DATE of this communication appears on the cover sheet with the correspondence address --

Period for Reply

A SHORTENED STATUTORY PERIOD FOR REPLY IS SET TO EXPIRE 3 MONTH(S) FROM THE MAILING DATE OF THIS COMMUNICATION.

- Extensions of time may be available under the provisions of 37 CFR 1.136(a). In no event, however, may a reply be timely filed after SIX (6) MONTHS from the mailing date of this communication.
- If the period for reply specified above is less than thirty (30) days, a reply within the statutory minimum of thirty (30) days will be considered timely.
- If NO period for reply is specified above, the maximum statutory period will apply and will expire SIX (6) MONTHS from the mailing date of this communication.
- Failure to reply within the set or extended period for reply will, by statute, cause the application to become ABANDONED (35 U.S.C. § 133).
- Any reply received by the Office later than three months after the mailing date of this communication, even if timely filed, may reduce any earned patent term adjustment. See 37 CFR 1.704(b).

Status

- 1) ☐ Responsive to communication(s) filed on ____.
- 2a) ☐ This action is **FINAL**. 2b) ☒ This action is non-final.
- 3) ☐ Since this application is in condition for allowance except for formal matters, prosecution as to the merits is closed in accordance with the practice under *Ex parte Quayle*, 1935 C.D. 11, 453 O.G. 213.

Disposition of Claims

- 4) ☒ Claim(s) 1-13 is/are pending in the application.
- 4a) Of the above claim(s) ____ is/are withdrawn from consideration.
- 5) ☐ Claim(s) ____ is/are allowed.
- 6) ☒ Claim(s) 1-13 is/are rejected.
- 7) ☐ Claim(s) ____ is/are objected to.
- 8) ☐ Claim(s) ____ are subject to restriction and/or election requirement.

Application Papers

- 9) ☒ The specification is objected to by the Examiner.
- 10) ☐ The drawing(s) filed on ____ is/are: a) ☐ accepted or b) ☐ objected to by the Examiner.
Applicant may not request that any objection to the drawing(s) be held in abeyance. See 37 CFR 1.85(a).
- 11) ☐ The proposed drawing correction filed on ____ is: a) ☐ approved b) ☐ disapproved by the Examiner.
If approved, corrected drawings are required in reply to this Office action.
- 12) ☒ The oath or declaration is objected to by the Examiner.

Priority under 35 U.S.C. §§ 119 and 120

- 13) ☒ Acknowledgment is made of a claim for foreign priority under 35 U.S.C. § 119(a)-(d) or (f).
a) ☐ All b) ☐ Some * c) ☒ None of:
1. ☒ Certified copies of the priority documents have been received.
2. ☐ Certified copies of the priority documents have been received in Application No. ____.
3. ☐ Copies of the certified copies of the priority documents have been received in this National Stage application from the International Bureau (PCT Rule 17.2(a)).
* See the attached detailed Office action for a list of the certified copies not received.
- 14) ☐ Acknowledgment is made of a claim for domestic priority under 35 U.S.C. § 119(e) (to a provisional application).
a) ☐ The translation of the foreign language provisional application has been received.
- 15) ☐ Acknowledgment is made of a claim for domestic priority under 35 U.S.C. §§ 120 and/or 121.

Attachment(s)

- | | |
|---|---|
| 1) <input checked="" type="checkbox"/> Notice of References Cited (PTO-892) | 4) <input type="checkbox"/> Interview Summary (PTO-413) Paper No(s). ____. |
| 2) <input type="checkbox"/> Notice of Draftsperson's Patent Drawing Review (PTO-948) | 5) <input type="checkbox"/> Notice of Informal Patent Application (PTO-152) |
| 3) <input checked="" type="checkbox"/> Information Disclosure Statement(s) (PTO-1449) Paper No(s) <u>1/14</u> . | 6) <input type="checkbox"/> Other: |

DETAILED ACTION

Oath/Declaration

1. The oath or declaration is defective. A new oath or declaration in compliance with 37 CFR 1.67(a) identifying this application by application number and filing date is required. See MPEP §§ 602.01 and 602.02.

The oath or declaration is defective because: It was not signed.

Priority

2. Acknowledgment is made of applicant's claim for foreign priority based on an application filed in Germany on 1-13-2001. It is noted, however, that applicant has not filed a certified copy of the 101 01 351.5-52 application as required by 35 U.S.C. 119(b).

Specification

3. The disclosure is objected to because of the following informalities: On page 6, lines 20 and 21, applicant refers to the second and third resistances. It would appear that this should instead be the *first* and *second* resistances.
4. The title of the invention is not descriptive. A new title is required that is clearly indicative of the invention to which the claims are directed.

Appropriate correction is required.

Claim Rejections - 35 USC § 112

5. The following is a quotation of the second paragraph of 35 U.S.C. 112:

The specification shall conclude with one or more claims particularly pointing out and distinctly claiming the subject matter which the applicant regards as his invention.

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6. Claims 1-13 are rejected under 35 U.S.C. 112, second paragraph, as being indefinite for failing to particularly point out and distinctly claim the subject matter which applicant regards as the invention.

7. Claim 1 specifies that the positive and negative temperature coefficients “are coordinated” to arrive at a total resistance that is “at least approximately constant”. With respect to the first quoted phrase, it appears the applicant is attempting to claim an apparatus based on the process utilized to construct the apparatus. Apparatus claims should be drawn to what the structure is and not how one arrived at said structure. With respect to the second quoted phrase, what would one possessing ordinary skill in the art reasonably construe as being approximately constant? Presumably, one possessing ordinary skill in the art would wish to not have the resistance of the leads vary as little as possible to prevent any error to the sensor signal. When would those efforts to prevent the resistance from varying too much read on the instant invention? Moreover, because the applicant has not defined how large a change in temperature distribution is required for the approximately constant total resistance, presumably any sensor would qualify if the temperature change in question were small enough (or over a particular range of temperatures not normally subject to large resistive changes). Clarification is requested.

8. In claim 5, it is unclear what is being claimed by the limitation beginning “the change”.

9. Claims 8 and 9 do not appear to have any structure associated with it.

Claim Rejections - 35 USC § 102

10. The following is a quotation of the appropriate paragraphs of 35 U.S.C. 102 that form the basis for the rejections under this section made in this Office action:

A person shall be entitled to a patent unless –

(e) the invention was described in (1) an application for patent, published under section 122(b), by another filed in the United States before the invention by the applicant for patent or (2) a patent granted on an application for patent by another filed in the United States before the invention by the applicant for patent, except that an international application filed under the treaty defined in section 351(a) shall have the effects for purposes of this subsection of an application filed in the United States only if the international application designated the United States and was published under Article 21(2) of such treaty in the English language.

11. Claims 1-11 are rejected under 35 U.S.C. 102(e) as anticipated by or, in the alternative, under 35 U.S.C. 103(a) as obvious over Matsubara et al (USP 6,348,140 B1).

12. With respect to the claims 1, 3, and 4, as best understood, Matsubara discloses a sensor element comprising lead wires (23c, 23d) and a measuring device comprising electrodes 23a and 23b thereby defining a measurement area (fig. 1, 2A, and 2B). The lead wires are metallic (col. 5, lines 32-42) so they have an inherently positive temperature coefficient and they sandwich a solid electrolyte element 13 which would have an inherently negative temperature coefficient. The resistances associated with these positive and negative temperature coefficients as well as electrodes 23a and 23b, which with the electrolyte 13 under the measurement area would constitute the defined third electrical resistance, would constitute a total resistance. With respect to the limitations drawn to the *coordination* of these various resistances, the determination of patentability for the claim is based on the product itself. Because the product of the claim is identical to the invention of Matsubara the process from which it was made is the same as or obvious over the process utilized by Matsubara (see *In re Thorpe*, 777 F.2d 695, 698). Alternatively, the purpose of the electrode lead configuration of Matsubara is so that the resistance of the leads remains low and doesn't vary much (col. 2, lines 48-67 and col. 5, lines 43-67). If the resistance of the leads is kept low, these leads would be less susceptible to temperature changes so that any variation in the temperature distribution in the lead wires would

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be sufficiently small that it would read on the term “approximately constant” giving the claim language its broadest reasonable interpretation.

13. With respect to claims 2, 8, 9, and the limitation beginning “the change” in claim 5, that is only the intended use of the apparatus and the intended use need not be given further due consideration in determining patentability.

14. With respect to the housing of claim 5, elements 15 and 30 in combination (or any unspecified structure holding the sensor in the exhaust gas line) would constitute the specified housing giving the claim language its broadest reasonable interpretation.

15. With respect to claim 6, portions of the leads near the electrodes (and consequently near a portion subject to the greatest heating) are narrower than portions of the leads near the outlet end of the sensor (compare the upper portions of 23c and 23d with the lower portions of 23c and 23d in fig. 2A and 2B). Because resistance of a metal material varies as the cross section of the material, those upper portions would have higher resistances.

16. With respect to claim 7, see col. 9, lines 1-15.

17. With respect to claims 10 and 11 (those limitations not covered above), see col. 2, lines 33-38; col. 5, lines 1-10; and col. 11, lines 24-34.

Allowable Subject Matter

18. Claims 12 and 13 would be allowable if rewritten to overcome the rejection(s) under 35 U.S.C. 112, second paragraph, set forth in this Office action and to include all of the limitations of the base claim and any intervening claims.

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19. The following is a statement of reasons for the indication of allowable subject matter:
The prior art does not disclose nor render obvious all the limitations of claim 3 and further comprise the claimed combination of Al_2O_3 , platinum, and palladium for the lead wire.

Conclusion

20. The prior art made of record and not relied upon is considered pertinent to applicant's disclosure. Hori and Diehl disclose alternate lead configurations.

Any inquiry concerning this communication or earlier communications from the examiner should be directed to Kaj Olsen whose telephone number is (703) 305-0506. The examiner can normally be reached on Monday through Thursday from 7:00 AM-4:30 PM. The examiner can also be reached on alternate Fridays.

If attempts to reach the examiner are unsuccessful, the examiner's supervisor, Mr. Nam Nguyen, can be reached at (703) 308-3322.

When filing a fax in Group 1700, please indicate in the header "Official" for papers that are to be entered into the file, and "Unofficial" for draft documents and other communications with the PTO that are not for entry into the file of this application. This will expedite processing of your papers. The fax number for regular communications is (703) 305-3599 and the fax number for after-final communications is (703) 305-5408.

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Any inquiry of a general nature or relating to the status of this application should be directed to the Group receptionist, whose telephone number is (703) 308-0661.

A handwritten signature in black ink, appearing to read 'Kaj Olsen', with a long, sweeping horizontal line extending to the right.

Kaj K. Olsen
Patent Examiner
AU 1753
November 17, 2003